

wherein  $R^1$  is hydrogen, methoxy or formamido;

$R^2$  is an acyl group;

$CO_2R^3$  is a carboxy group or a carboxylate anion, or  $R^3$  is a readily removable carboxy protecting group;

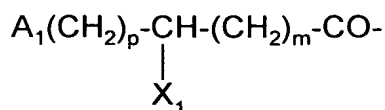
$R^4$  represents hydrogen or up to four substituents selected from alkyl, alkenyl, alkynyl, alkoxy, hydroxy, halogen, amino, alkylamino, acylamino, dialkylamino,  $CO_2R$ ,  $CONR_2$ ,  $SO_2NR_2$  (where R is hydrogen or  $C_{1-6}$  alkyl) and aryl [and heterocyclyl], which may be the same or different and wherein any  $R^4$  alkyl substituent is optionally substituted by any other  $R^4$  substituent;

X is S, SO,  $SO_2$ , O or  $CH_2$ ;

m is 1 or 2;

n is 0;

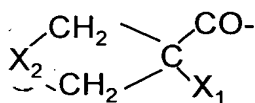
"acyl" is selected from the group consisting of formula (a) to (f):



(a)



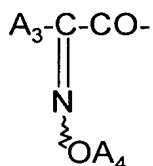
(b)



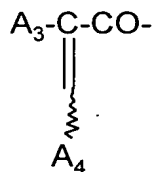
(c)



(d)



(e)



(f)

wherein p is 0, 1 or 2;

m is 0, 1 or 2;

A<sub>1</sub> is (C<sub>1-6</sub>)alkyl, substituted (C<sub>1-6</sub>)alkyl, (C<sub>3-6</sub>)cycloalkyl, cyclohexenyl, cyclohexadienyl, or an aromatic [or heteroaromatic] group;

X<sub>1</sub> is a hydrogen or halogen atom, a carboxylic acid, carboxylic ester, sulphonic acid, azido, tetrazolyl, hydroxy, acyloxy, amino, ureido, acylamino, heterocyclamino, guanidino or acylureido group;

A<sub>2</sub> is an aromatic or [heteroaromatic group,] a substituted alkyl group, or a substituted dithietane;

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